

## CLAIMS

I CLAIM:

1. Probe apparatus for an electronic instrument comprising:
  - 2 a first housing containing a push-on connector that mates with a panel mounted connector on the electronic instrument and that has detents that automatically engage when the push-on connector is mated to the panel mounted connector, a nonautomatic-mating end of the push-on connector having a first RF connector;
  - 6 a second housing containing a probe assembly for probing a signal of interest and also a second RF connector which carries a probed signal;
  - 8 a cable having a signal transmission portion and to which is coupled at one end a third RF connector and a fourth RF connector at the other; and
  - 10 the first and third RF connectors being mated together within the first housing and the second and fourth RF connectors being mated together within the second housing.
2. Probe apparatus as in claim 1 wherein the signal transmission portion of the cable is a coaxial transmission line having a characteristic impedance, and the push-on connector and the first through fourth RF connectors are each coaxial and of the same characteristic impedance as the signal transmission portion of the cable.
3. Probe apparatus as in claim 1 wherein the push-on connector is BNC.
4. Probe apparatus as in claim 1 wherein the first and third RF connectors are APC 3.5.
5. Probe apparatus as in claim 1 wherein the second and fourth RF connectors are APC 3.5.
6. Probe apparatus as in claim 1 wherein the first and third RF connectors are non-threaded connectors.

7. Probe apparatus as in claim 1 wherein the second and fourth RF connectors are non-threaded  
2 connectors.

8. Probe apparatus for an electronic instrument comprising:

2 a first housing containing a push-on connector that mates with a panel mounted connector on the electronic instrument and that has detents that automatically engage when the push-on connector is mated to the panel mounted connector, a nonautomatic-mating end of the push-on connector having a first RF connector;

4 a second housing containing a probe assembly for probing a signal of interest and also a threaded bore for receiving an RF connector which carries a probed signal;

6 a cable having a signal transmission portion and to which is coupled at one end a second RF connector and a third RF connector at the other; and

8 the first and second RF connectors being mated together within the first housing and the third RF connector being mated to the threaded bore within the second housing.

9. Probe apparatus as in claim 8 wherein the signal transmission portion of the cable is a coaxial  
2 transmission line having a characteristic impedance, and the push-on connector and the first through  
4 third RF connectors are each coaxial and of the same characteristic impedance as the signal transmission portion of the cable.

10. Probe apparatus as in claim 8 wherein the push-on connector is BNC.

11. Probe apparatus as in claim 8 wherein the first and second RF connectors are APC 3.5.

12. Probe apparatus as in claim 8 wherein the first and second RF connectors are non-threaded  
2 connectors.